

## Preparation of Fe<sub>3</sub>O<sub>4</sub>@polypyrrole Composite Materials for Asymmetric Supercapacitor Applications

Shiyun Li,<sup>a,\*</sup> Ling Zhang,<sup>a</sup> Luxi Zhang,<sup>a</sup> Yuqiong Guo,<sup>a</sup> Xuecheng Chen,<sup>b,c,\*</sup> Rudolf Holze,<sup>d,e,f</sup> Tao Tang<sup>g,\*</sup>

*a. School of Materials Science and Engineering, Jiangsu University of Science and Technology, Zhenjiang 212003, China.*

*b. School of Environment and Chemical Engineering, Shenyang University of Technology, Shenyang, 110870, China.*

*c. Faculty of Chemical Technology and Engineering, West Pomeranian University of Technology, Szczecin, Piastów Ave. 42, 71-065 Szczecin, Poland.*

*d. Chemnitz University of Technology, Institut für Chemie, AG Elektrochemie, 09107 Chemnitz, Germany.*

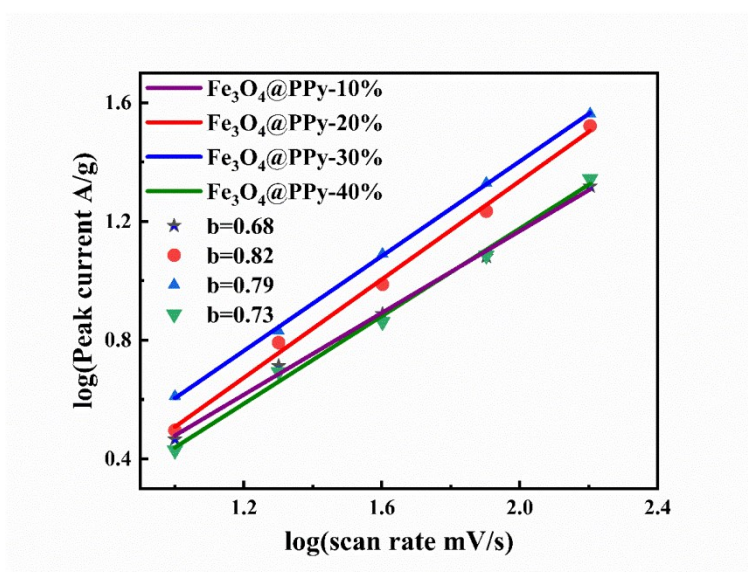
*e. State Key Laboratory of Materials-oriented Chemical Engineering, School of Energy Science and Engineering, Nanjing Tech University, Nanjing, 211816, Jiangsu Province, China.*

*f. Saint Petersburg State University, Institute of Chemistry, St. Petersburg, 199034, Russia.*

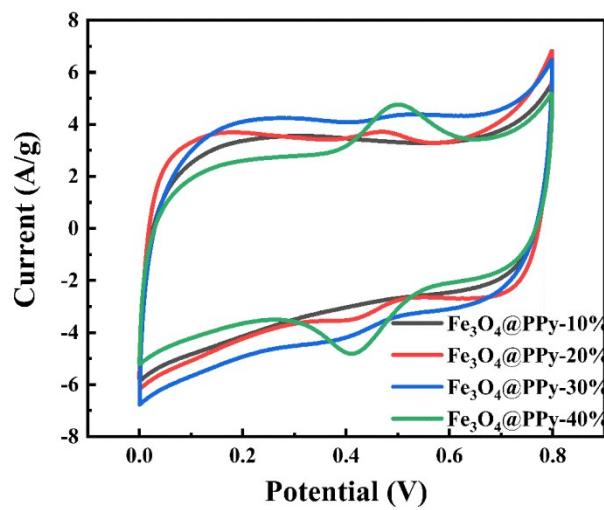
*g. State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry (CIAC), Chinese Academy of Sciences, Changchun 130022, China.*

Corresponding author: Shiyun Li, Xuecheng Chen, Tao Tang

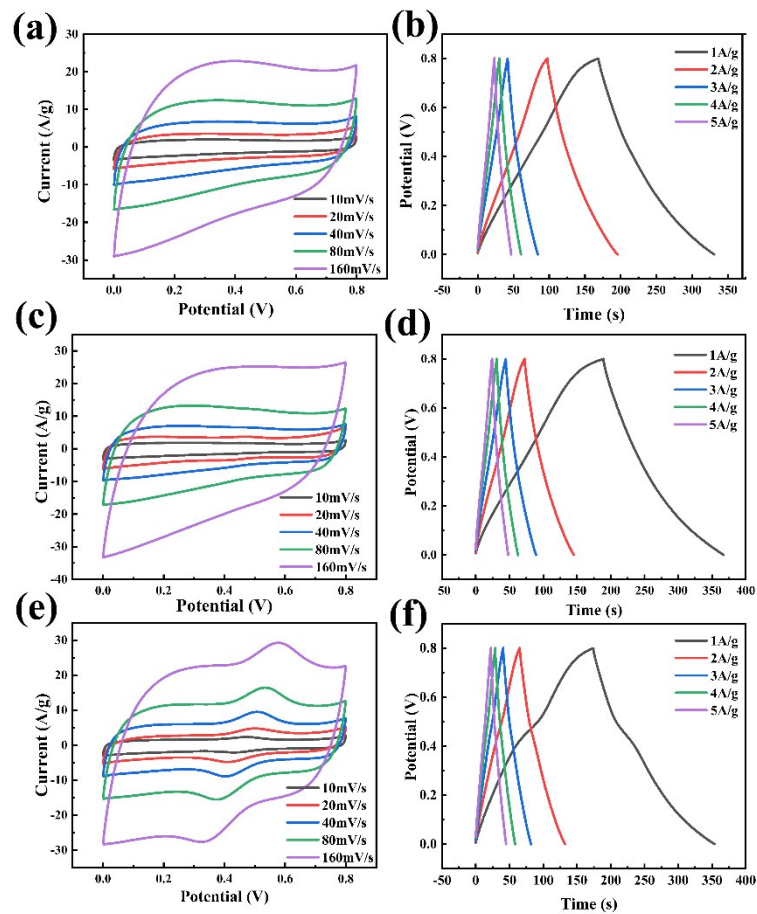
E-mail: [shiyunli@just.edu.cn](mailto:shiyunli@just.edu.cn); [xchen@zut.edu.pl](mailto:xchen@zut.edu.pl); [ttang@ciac.ac.cn](mailto:ttang@ciac.ac.cn)



**Figure S1.** b-value curves of Fe<sub>3</sub>O<sub>4</sub>@PPy composite materials with different Fe<sub>3</sub>O<sub>4</sub> contents.



**Figure S2.** The CV cure of Fe<sub>3</sub>O<sub>4</sub>@PPy -X composite materials.



**Figure S3.** (a, b) CV and GCD curves of Fe<sub>3</sub>O<sub>4</sub>@PPy-10% composite material under different current density. (c, d) CV and GCD curves of Fe<sub>3</sub>O<sub>4</sub>@PPy-20% composite material under different current density. (e, f) CV and GCD curves of Fe<sub>3</sub>O<sub>4</sub>@PPy-40% composite material under different current density.